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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/728,889	12/02/2000	Victor R. Stefanovic	199-1306	5704

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EXAMINER

GONZALEZ, JULIO C

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 03/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/728,889

Applicant(s)

STEFANOVIC ET AL.

Examiner

Julio C. Gonzalez

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 21 November 2002 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crecelius et al in view of Rawcliffe.

Crecelius et al discloses an induction machine 12, a sensor 52, an inverter 74 having a plurality of switches (see figure 4) and the inverter is connected to the windings 38 and microprocessor is connected to the inverter 74 (see figure 3). Moreover, the controller uses pole width modulation signals 68. However, Crecelius et al does not disclose using pole phase modulation to change the number of poles.

On the other hand, Rawcliffe discloses for the purpose of minimizing unwanted harmonics in electrical machines that pole phase modulation may be used to change the number of poles in motor or generator (column 2, lines 6-24).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design a system using an induction machine as disclosed

by Crecelius et al and to modify the invention by using pole phase modulation to vary the number of poles for the purpose of minimizing unwanted harmonics in electrical machines as disclosed by Rawcliffe.

3. Claims 2-4 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crecelius et al and Rawcliffe as applied to claim 1 above, and further in view of Miyazaki et al.

The combined system discloses all of the elements above. However, the combined system does not disclose using vector control.

On the other hand, Miyazaki et al discloses for the purpose of minimizing the cost of generators and effectively determined the position of the poles that a generator may be controlled using vector control (see figures 1A, 1B).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the combined system as disclosed above and to modify the invention by using vector control for the purpose of minimizing the cost of generators and effectively determined the position of the poles as disclosed by Miyazaki et al.

4. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Crecelius et al and Rawcliffe as applied to claim 1 above, and further in view of Le.

The combined system discloses all of the elements above. However, the combined system does not disclose using a digital signal processor.

On the other hand, Le discloses for the purpose of providing precise synchronized control in an electrical machine, a digital signal processor 70.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the combined system as disclosed above and to modify the invention by using a digital signal processor for the purpose of providing precise synchronized control in an electrical machine as disclosed by Le.

5. Claims 5-7 and 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crecelius et al, Rawcliffe and Miyazaki et al as applied to claims 1 and 9 above, and further in view of Miller et al.

The combined system discloses all of the elements above. However, the combined system does not disclose using a toroidally wound stator.

On the other hand, Miller et al discloses for the purpose of promoting heat dissipation, a toroidally wound stator (see figure 1).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the combined system as disclosed above and to use a toroidally wound stator for the purpose of promoting heat dissipation as disclosed by Miller et al.

Response to Arguments


6. Applicant's arguments with respect to claims 1-14 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julio C. Gonzalez whose telephone number is (703) 305-1563. The examiner can normally be reached on M-F (8AM-5PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.


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Jcg

February 26, 2003